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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Matthew R Perkins

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EXAMINER

LY, NGHI H

ART UNIT

PAPER NUMBER

2686

DATE MAILED: 03/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/596,442

Applicant(s)

PERKINS ET AL.

Examiner

Nghị H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655).

Regarding claim 1, Ishikawa teaches a method for accessing a radio communication system having a plurality of radios (see column 4, lines 54-57), comprising the steps of: (a) separating the plurality of radios into two or more groups (column 22, lines 18-20, see "dividing"), (b) gathering a communication statistic on the plurality of radios (Ishikawa, column 22, lines 18-38, see "*dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances.*" However, column 16, lines 53-56, Ishikawa further discloses that "*the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12.*" Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa's "**reception level**" reads on applicant's **statistic**. In addition, Applicant's specification page 2, lines 22-25 discloses statistic could be signal strength, and

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Ishikawa's "reception level" reads on Applicant's "signal strength") and c) grouping of radios based on the communication statistic gathered in step (b) (also see column 22, lines 18-22 and Examiner's answer above).

Ishikawa does not specifically disclose reconfiguring the grouping of radios. However, since the distances (see column 16, lines 53-56, the distance based on reception level. Therefore, mobile stations are divided into groups based on reception level), *the moving directions, and the moving speeds of the mobile station* in the system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that the group of mobile units are reconfiguring, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station*.

Regarding claim 2, Ishikawa further teaches comprising the step of: (d) allowing access to the radio communication system based on the grouping of the radios (see column 22, lines 18-22).

Regarding claim 3, Ishikawa teaches the communication statistic gathered in step (b) comprises the changing distances, the moving directions, and the moving speeds of the mobile station by each of the plurality of radios (see column 22, lines 18-22) and reception level (see column 16, lines 53-56). Ishikawa does not specifically disclose communication statistic gathered in step (b) comprises the average channel usage, or channel accesses per unit time, or priority or talk-time by each of the plurality of radios. However, those skilled in the art would have appreciated that the system of

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Ishikawa also be used with other statistic such as average channel usage, or channel accesses per unit time, or priority or talk-time by each of the plurality of radios.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Ishikawa, so that the communication statistic comprises more features.

Regarding claim 4, claim 4 is rejected with a similar reason as set forth in claim 3 above.

Regarding claim 5, claim 5 is rejected with a similar reason as set forth in claim 3 above.

Regarding claim 6, Ishikawa further teaches the communication statistic gathered in step (b) comprises the average received signal strength of each of the plurality of radios (Ishikawa, column 22, lines 18-38, see *"dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances."*

However, column 16, lines 53-56, Ishikawa further discloses that *"the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12."* Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa's "**reception level**" reads on applicant's **statistic**. In addition, Applicant's specification page 2, lines 22-25 discloses statistic could be signal strength, and Ishikawa's "**reception level**" reads on Applicant's "**signal strength**").

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Regarding claim 7, Ishikawa teaches steps b and d. Ishikawa inherently teaches repeating steps (b) through (d) periodically (see rejection of claim 1 above). Since *the distances* (see column 16, lines 53-56, the distance based on reception level. Therefore, mobile stations are divided into groups based on reception level), *the moving directions, and the moving speeds of the mobile station* in the in system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that repeating steps (b) through (d) periodically, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station* (see column 22, lines 18-22).

Regarding claim 9, Ishikawa further teaches the step (b) is performed by a radio communication system controller (see column 7, lines 48-55).

Regarding claim 17, claim 17 is rejected with a similar reason as set forth in claim 3 above.

3. Claims 8, 10-14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Muller (US 6,438,375).

Regarding claim 8, Ishikawa teaches a method as defined in claim 1. Ishikawa does not specifically disclose the two or more groups of radios established in step (a) can access the radio communication system at specified times which are different for each of the two or more groups.

Muller teaches the two or more groups of radios established in step (a) can access the radio communication system at specified times which are different for each of the two or more groups (see column 3, lines 10-14).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Muller into the system of Ishikawa in order to provide a method and apparatus for efficiently communicating different types of control message between a radio network and a mobile radio station (see Muller, column 1, lines 5-10).

Regarding claim 10, the combination of Ishikawa and Muller further teaches a step (b) is performed by each of the plurality of radios (see Ishikawa, FIG.1, mobile station 12 and Muller, fig. 6, MS 30).

Regarding claim 11, Ishikawa teaches a method for accessing a radio communication system having a plurality of radios (see column 4, lines 54-57), comprising the steps of: (a) separating the plurality of radios into two or more groups (column 22, lines 18-20, see "dividing"), (b) gathering a communication statistic on the plurality of radios (Ishikawa, column 22, lines 18-38, see "*dividing the mobile stations into a plurality of groups according to the features of the mobile stations such as distances.*" However, column 16, lines 53-56, Ishikawa further discloses that "*the distance of the mobile station 12 from the base station 11 is estimated by measuring the reception level at the base station 11 of the radio wave transmitted from the mobile station 12.*" Or the mobile stations of Ishikawa are divided into groups based on distance, however, the distance based on the reception level. Therefore, the teaching of Ishikawa inherently

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teaches the mobile stations are divided into groups based on **reception level**, and Ishikawa's "**reception level**" reads on applicant's **statistic**. In addition, Applicant's specification page 2, lines 22-25 discloses statistic could be signal strength, and Ishikawa's "**reception level**" reads on Applicant's "**signal strength**") and c) grouping of radios based on the communication statistic gathered in step (b) (also see column 22, lines 18-22 and Examiner's answer above).

Ishikawa does not specifically disclose reconfiguring the grouping of radios. However, since the *distances, the moving directions, and the moving speeds of the mobile station* in the system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that the group of mobile units are reconfiguring, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station*.

Ishikawa does not specifically disclose (d) allowing access to the radio communication system by each of the two or more groups of radios at different predetermined periods of time.

Muller teaches (d) allowing access to the radio communication system by each of the two or more groups of radios at different predetermined periods of time (see column 3, lines 10-14).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Muller into the system of Ishikawa in order to provide a method and apparatus for efficiently communicating

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different types of control message between a radio network and a mobile radio station (see Muller, column 1, lines 5-10).

Regarding claim 12, the combination of Ishikawa and Muller teaches a method as defined in claim 11. The combination of Ishikawa and Muller does not specifically disclose the radio communication system comprises a time division multiple access radio communication system. However, the Examiner takes Official Notice that such time division multiple access radio communication system as recited in the claim are known in the art in order to save radio spectrum and permit many simultaneous conversations over a finite frequency.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Muller and Ishikawa for providing a method as claimed, in order to save radio spectrum and permit many simultaneous conversations over a finite frequency.

Regarding claim 13, Ishikawa teaches steps (b) and (c) are repeated periodically. Ishikawa inherently teaches repeating steps (b) through (d) periodically (see rejection of claim 1 above). Since *the distances, the moving directions, and the moving speeds of the mobile station* in the in system of Ishikawa varies at time, it would have been obvious to one of the ordinary skill in the art to modify Ishikawa such that repeating steps (b) through (d) periodically, so that the groups can be associated with the *changing distances, the moving directions, and the moving speeds of the mobile station* (see column 22 lines 18-22).

Regarding claim 14, Ishikawa further teaches the communication statistic in step (b) is gathered by a central radio communication system resource (see column 1, lines 22-32).

Regarding claim 16, Ishikawa further teaches the steps (b) and (c) are performed at predetermined periods of time (see column 4, lines 33-53).

Regarding claim 18, Ishikawa teaches the communication statistic gathered in step (b) comprises the changing distances, the moving directions, and the moving speeds of the mobile station by each of the plurality of radios (see column 22, lines 18-22). Ishikawa does not specifically disclose communication statistic gathered in step (b) comprises the talk-time by each of the plurality of radios. However, those skilled in the art would have appreciated that the system of Ishikawa also be used with other statistic such as the talk-time associated with each of the plurality of radios.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the teaching of Ishikawa, so that the communication statistic comprises more features.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (US 5,666,655) in view of Muller (US 6,438,375) and further in view of Raith (US 6,385,461).

Regarding claim 15, the combination of Ishikawa and Muller teaches a method as defined in claim 11. The combination of Ishikawa and Muller does not specifically

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disclose the communication statistic in step (b) is gathered by each of the plurality of radios.

Raith teaches the communication statistic in step (b) is gathered by each of the plurality of radios (see column 2 lines 33-36 and lines 62-65).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Raith into the system of Muller and Ishikawa in order to individual users with the opportunity to joint group calls at any time (see Raith column 2 lines 25-27).

Response to Arguments

5. Applicant's arguments filed 12/16/05 have been fully considered but they are not persuasive.

On page 5 of applicant's remarks, Applicant argues that none of the references teach applicant's invention.

In response, all of the cited references in the previous Office action indeed teach applicant' invention. In addition, Applicant's attention is directed to the rejection of claims 1-18 in the previous Office action (dated 06/30/05).

On pages 5 and 6 of applicant's remarks, Applicant argues that Ishikawa does not address the static situation where the distance between the mobile units and the base station does not change or if the mobile units do not move in Ishikawa, the distances will not vary and no reconfiguration will occur.

In response to Applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the static situation where the distance between the mobile units and the base station does not change or if the mobile units do not move*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, Applicant's invention discloses *grouping based on signal strength* and Ishikawa also teaches *grouping based on signal strength* (see rejection of claim 1 above). Therefore, Ishikawa does indeed teach Applicant's claimed invention.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

NHL
02/23/06

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